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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/932,042

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John R. Walton

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4497

7590

11/25/2003

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EXAMINER

BARRY, CHESTER T

ART UNIT

PAPER NUMBER

1724

DATE MAILED: 11/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/932,042

Applicant(s)

WALTON ET AL

Examiner

Chester T. Barry

Art Unit

1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 September 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 7, 11, 14-20 is/are pending in the application.
- 4a) Of the above claim(s) 1, 7, 11, 14-20 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6, 7, 19, 20 is/are allowed.
- 6) ☒ Claim(s) 1-4, 8, 11, 14-18 is/are rejected.
- 7) ☒ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. .
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) .
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6) ☐ Other:

Claims 1 – 4, 11 are rejected under 35 USC Sec. 102(e) as anticipated by Hamaguchi. USP 6495096 to Hamaguchi describes a method for reducing evolution of hydrogen sulfide vapors within a sanitary sewer system. The disclosed method includes adding an iron salt, e.g., ferric chloride or ferrous chloride (col 4 lines 34, 36), to a wastewater stream in a sanitary sewer system upstream of hydrogen sulfide volatilization, e.g., at point H in Fig. 9 below. The iron salt dissociates in water, so free iron ions are inherently generated in the process. Such ions react with hydrogen sulfide to form Fe(II) sulfide. Hamaguchi also describes the deliberate addition of hydrogen peroxide to the wastewater stream downstream of the point at which the iron salt was added, e.g., at point I. The resulting chemical reaction between Fe(II) sulfide and hydrogen peroxide regenerates free iron ions. Insofar as at least one point along the “comparative Example 11” curve of Fig. 11 appears to be less than 10 ppm, and the peroxide concentration was 10 ppm (10 mg/L, column 17), the claim 11 limitation appears to have been met.

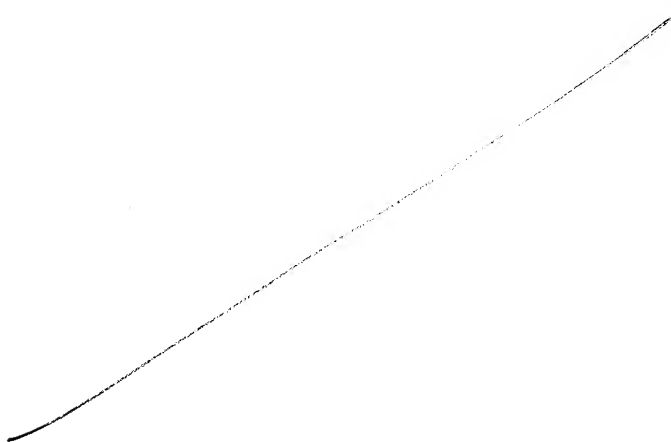
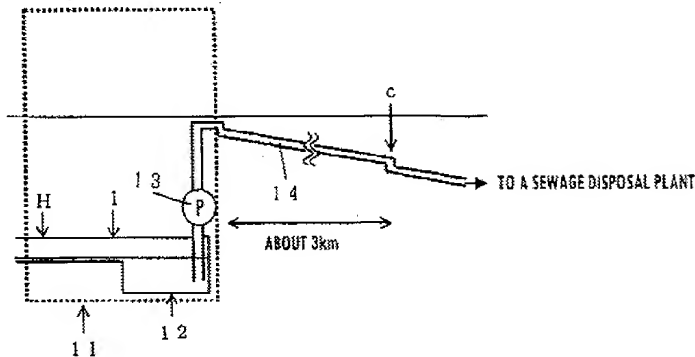


FIG. 9



Hamaguchi's Example 37 (col 17):

Sewage in a pit 12 of a pumping station 11 was transferred to a sewage disposal plant through sewer pipe 14 by a transfer pump 13.

In the above process for treating sewage, a 37% solution of iron(III) chloride H was added into an inlet of a grit chamber of a pumping station 11 in such an amount that the concentration was 39 mg/liter (5 mg/liter as the iron atom) in the sewage, and a mixed solution I containing hydrogen peroxide and nitric acid was continuously added into an outlet of the grit chamber in such an amount that the concentration of hydrogen peroxide was 10 mg/liter as 100% hydrogen peroxide and the concentration of the nitrate ion was 7 mg/liter in the sewage.

Claim 5 is objected to as being dependent on a rejected base claim, but would be allowed if presented in independent form.

Claims 9, 14 are rejected under 35 USC Sec. 103(a) as obvious over Hamaguchi.

Hamaguchi describes a downstream "sewage disposal plant." Conventional sewage disposal plants typically oxidize sewage using oxidants, such as air, oxygen, ozone, or hydrogen peroxide. It would have been obvious to have fed the sewage from point "c"

in Fig 9 to such a conventional sewage disposal plant, rather to an ineffective sewage treatment plant that does not employ any oxidants.

Claims 15-16 are rejected under 35 USC Sec. 103(a) as obvious over Hamaguchi. It would have been obvious to have used stoichiometric amounts of chemical reactants: Less is too little to consume all the sulfide while an excess is – by definition - excessive.

Claim 17 is rejected under 35 USC 102(e) over USP 6245553 to Keyser. See col 4 lines 30 – 42. Use of an oxidant other than air or oxygen is suggested at col 4 line 59.

Claim 18 is rejected under 35 USC Sec. 103(a) as obvious over Keyser, as applied to claim 17 above, and Hamaguchi. Keyser is directed to hydrogen sulfide odor control of wastewater. Keyser suggests use of "other oxidants," col 4 line 59, but does not specifically suggest hydrogen peroxide. It would have been obvious to have substituted hydrogen peroxide for air or oxygen because Hamaguchi points out the use of hydrogen peroxide in controlling hydrogen sulfide odors in wastewater.

Claims 6 – 7, 19, 20 are allowed.

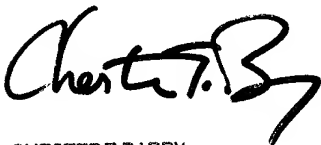
Mullenix shows an alternative approach to controlling hydrogen sulfide odors in sewers.

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Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.



CHESTERT. BARRY
PRIMARY EXAMINER

703.306.5921